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The Dade County Board of Public Instruction directed a study of the effects of limiting the educational television services of WTHS and WSEC, and the possibility of using those services as a part-time teaching aid rather than a full-time educational process. A cumulative capital investment of $1,317,255 in television facilities provided 2,729 hours of instructional programing in 1966-67, broadcast to 137,516 pupils in 310 schools. Although the discontinuation of television would release $700,000 for other spending during the year, expensive revisions in personnel, curriculum, education, and financing would be necessary. Part-time operation of television might take the form of limitation to elementary, secondary, or community television, restriction of broadcasting to one channel, the telecasting of only previously produced videotape programs, or a combination of these alternatives. Instructional television problems are born of the system-wide problem of inadequate classroom space for large-group instruction, which inhibits flexibility in program scheduling and the development of centralized and decentralized television operations. (TI)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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ETV STUDY, 1967

This report has been prepared as directed by the Dade County Board of Public Instruction on June 21, 1967. The assignment was that "the administration report back, within the next six weeks, the effect of dropping Educational Television, possibly for the 1967-68 school year, but not later than the 1968-69 school year, and what the effect would be on personnel, curriculum, education, and finances; also, the possibility of using Educational Television in a limited way as a part-time teaching aid, rather than a full-time educational process."

NATURE OF THE TELEVISION OPERATION

Extent of Use

Such an assignment involves an examination of the exact nature of Dade County's television operation. Presently, the Dade County Board of Public Instruction owns two television stations - WTHS (Channel 2) and WSEC (Channel 17). These two stations during 1966-67 telecast a total of 2,729 hours of instructional and community television programming. Fifteen series of telelessons for the elementary schools and nine series of telelessons for secondary schools have been telecast this past year. The Board has provided a total of 45½ hours of instructional telecasting each week. From 5 p.m. to 11 p.m., Mondays through Fridays, community television programs are telecast over Channel 2, a total of 1,560 scheduled hours.

In September, construction of the Board's first of four 2500-megacycle channels will be completed. This channel will provide 1,404 additional hours of broadcast time to the instructional schedule in the 1967-68 school year.

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During 1966-67 instructional programs were telecast to:

Schools	Pupils
145 elementary public	54,147
35 junior high public	27,873
18 senior high public	28,481
6 elementary parochial	1,309
12 secondary parochial	1,069
72 elementary public (Broward County)	15,750
22 secondary public (Broward County)	8,887
310 elementary and secondary public and parochial schools	137,516

This makes a grand total of 137,516 pupils attending 310 schools using instructional telelessons provided by the Dade County Board of Public Instruction.

Selection and use of these telelessons in classrooms, large or small, have been the voluntary choices of the principals in the participating schools. They could have elected to do without television in their large classrooms, and some have done so. The majority, however, through the years have chosen to use television instruction combined with follow-up instruction by teachers of the large classroom.

Capital Investment

The capital investment of the Board in television is considerable. In land, in the transmitter building and tower located in Broward County, and in broadcasting equipment, the Board has invested a total of $1,317,255.

The present instructional television operation includes the following licenses, facilities, and equipment:

1. Broadcast licenses from the Federal Communications Commission to operate Channel 2, Channel 17, and Channels KTB-84 and KTB-85
2. The television transmitter building and land in Broward County, the transmitter tower itself and antennas, now jointly owned by the Florida State Department of Education and the Board
3. A transmitting tower at Cutler Ridge Junior High School for the 2500-megacycle instructional television fixed service system
4. Two complete television studios, 45 feet x 35 feet x 25 feet high, each with standard professional equipment including four image orthicon Marconi cameras; 2 light control panels with dimmers for 60,000 watts each; rear screen projection equipment; technamation; and special effects amplifiers
5. Two complete professional standard audio control consoles
6. Two complete video switching consoles
7. An engineering master control switching and shading console
8. Five broadcast videotape recorders
9. Four film chains
10. Four 16mm projectors
11. Electronic testing equipment
12. A videotape library of 2,807 telelessons
13. A file of more than 40,000 illustrations and photographs
14. A library of more than 150 audiotapes
15. A library of 4,230 disc recordings
16. A fully equipped photographic laboratory with sound-on-film cameras, still cameras, and accompanying equipment

17. One 56-foot x 17-foot prop and storage room with props
18. One hundred and twenty-two distribution systems in 62 elementary and 60 secondary schools
19. More than 1300 television sets
20. Two 2500-megacycle transmitters, 37 special receiving antennas, and 37 down converters

The Board would lose the intangible value of six television channels if it abolishes television. For example, Channel 2's broadcast license is estimated to be worth in excess of 5 million dollars. Resale value of the television equipment is negligible in relation to its original cost because of the rapid technological advances in the industry and the prevailing use of color television equipment.

Personnel

In the Radio and Television Production Section there are eleven studio teachers, five producer-directors, one supervisor, one coordinator, a secretarial staff of four, three graphic artists, and two photographers. These personnel locate and select materials and programs produced elsewhere, revise locally produced programs, and produce new telelessons. In the past they have produced telelessons in driver education, language arts, social studies, science, reading, mathematics, pre-school, literature and the arts, as well as in-service education telelessons in linguistics, mathematics, science, social studies, and language arts.

A station manager, chief engineer, engineering coordinator, film technician, four control operators, eleven engineers, and a secretary in the radio

and Television Operation Section provide the support and operational staff for the Instructional and the Community Television Production Sections. These personnel operate and maintain $917,255 worth of electronic equipment and are responsible for the operation and maintenance of the four broadcast stations and the broadcast equipment. The staff also administer and operate the broadcast licensing in accordance with Federal regulations of the Board-owned broadcast facilities and are responsible for all government and federal applications and financial, inventory, and programming reports necessary for the retention and operation of the Board-owned broadcast licenses.

A supervisor, a special teacher, and one secretary are responsible for television utilization in the schools. The Utilization Section is responsible for liaison between the Instructional Division and in-school television personnel. Their duties include in-service education of teachers in the utilization of telelessons, developing instructional materials for classroom use, conducting research and development of new and improved programs, recommending improvement of facilities and equipment in the large classrooms, coordinating the production of instructional television curriculum guides and the use of audiovisual materials in the large classrooms, and on-site-visiting in the 198 Dade County public schools using television.

From 5 p.m. to 11 p.m. Community Television provides television programming service to the citizens of Southeast Florida over Channel 2. A weekly minimum audience of 115,000 families view the programs, Monday through Friday. During the 1966-67 fiscal year, 1,560 hours of cultural, informational, adult education, and youth enrichment programs were telecast; one-fourth of these programs were developed and produced locally. An executive vice-

president, a production director, a program director, a producer-director, a development and public relations director, a producer-photographer, a graphic artist, a stage manager, 2 cameramen, a continuity writer, an announcer-operator, and a secretarial staff of four are responsible for all scheduling, production, and development of Community Television programs.

THE HISTORY OF INSTRUCTIONAL TELEVISION IN DADE COUNTY

During the period that television has been used in the instructional programs in Dade County, there have been at least three significant changes in direction. Our first experiment was an attempt to answer the question: CAN WE TEACH PUPILS IN LARGE CLASSES WITH TELEVISION AS A MAJOR RESOURCE AS WELL AS OR BETTER THAN WE CAN IN SMALL CLASSES? At first, the savings in personnel provided by the large classes would be used to pay the cost of operating the television station. After this was accomplished, then other personnel savings would be given to the school for use in small classes not necessarily related to the television program. This project was carried on in selected schools for a period of three years and was carefully tested, not only by local personnel but also through the use of outstanding national consultants to give assurance that the testing was valid. It was found, as a result of these tests, that the subject matter learned by the pupils was equal to or better than that which they learned in smaller classes.

At that time, there was concern expressed that although pupils might make the same or better scores on testing, there might be the problem of increased achievement because of being involved in an experimental project and that there were other related items that pupils might not be understanding or other learnings they were not getting.

At the elementary level, several schools were re-organized through the savings in personnel provided by the large group instruction in which television was being used. For one-half of the school day, the pupils were instructed in basic skills classes or in groups of twenty-five (25) for the sole purpose of learning in language arts and mathematics. For the remainder of the day they were instructed in physical education, science, social studies, art, music, and all other subject areas not included in the skills classes. Television was used as a resource for some aspects of this program.

Television in Elementary Schools

The pupils were tested in language arts and mathematics, subjects in which television was not being used as a resource but where the classes had been reduced in size to twenty-five (25) and where concentrated attention had been given. In spite of concerted efforts that had been made in these subjects with smaller basic groups, testing over a period of time showed that these pupils in the elementary schools were not achieving as well as pupils who had been taught in self-contained classrooms of thirty or more pupils. Consequently, after sufficient data had been gathered, this program was discontinued, and television is now being used in elementary schools as an instructional resource in the regular classroom.

Twelve-Months' School Project

The second project in which television has been involved was one in which the Board conducted in 1965 a year-long study on the 12-months' school program: COULD SCHOOLS ACCOMMODATE ONE-THIRD MORE PUPILS IF SCHOOLS WERE SCHEDULED FOR OPERATION ALL YEAR ROUND? If they could, our capital investment

would be used to a greater extent. In the process of that study, the Board found out several things. One of the findings was that if schools were so operated, then instead of having a high school with 3,000 pupils for nine months, there would in effect be four schools of 750 pupils for each period of three consecutive quarters. Since the high school would have to be fully staffed for each quarter, any savings in personnel from year-round operation would therefore be lost. Another finding, set forth very clearly, however, was that from 30 to 35% more pupils could be accommodated in a given school building with large classroom groups using television as a resource during an extended school day. For a period of time, the secondary schools have operated on this principle.

Dilworth Report, 1964

When the Citizens' Committee on Quality Education made its report in 1963, they recommended that a special study be made on instructional television. Upon the recommendation of Dr. Harold Wigren, ETV Consultant of the National Education Association, Miss June Dilworth, Director of School Broadcasting, Station KCTS-TV, Channel 9, University of Washington, Seattle, was employed as a consultant for two months to study the entire operation. Her report, (Spring, 1964) contained numerous recommendations for improving the quality of the instructional television operation.

The principal idea at this time was to reserve for television those items of instruction best suited for this medium and to follow up television instruction in either a large class or small class situation, or even individually. Probably it was the largest of team-teaching ideas that have

been suggested by any school system at any time. Since that study, the efforts of personnel have been concentrated on making these distinctions and improving instructional telelessons. It was also recommended at that time that no attempt in savings of personnel be made. Instead, the total allocation of instructional personnel should be redeployed so as to facilitate follow-up instruction in many different ways rather than only large-group instruction with one teacher.

ITV and Follow-Up Instruction

The use of television in the large classroom was again changed. Instead of carrying on a complete course synchronizing the instruction of the teachers of the large classroom with that of the studio teacher and telelessons, certain parts of the program would be treated differently. Much work has been done in practically all of the subject areas using television to make these distinctions and to vary instructional programs. It has been pointed out that varied facilities for instructional television are necessary if the large group is to be handled differently following television instruction. Instructional television is not limited to large group instruction but can be, and at the elementary level is being, used in regular classrooms with teachers. At the secondary level, however, television cannot be so utilized because of inadequate housing. Even if there were enough rooms, use of small-group instruction exclusively would affect the assignment of faculty now teaching in other subject areas or with smaller groups. In the construction of new schools, more electronic equipment is being provided so that classroom teachers will have readily available on a flexible basis all of the resources that are possible throug films, visual aids, and television.

These three significant changes in direction illustrate the basic ways in which instructional television has been used in Dade County. There are other practical aspects, however, which must be taken into consideration. One of these is the attitude of the public and of the pupils toward instructional television and toward large-class groups.

ITV vs. Commercial TV

Instructional television has the problem of prompting (on the part of many people) an almost automatic comparison with commercial television. A teacher or team of teachers whose major purpose is to motivate students into an active process of learning is compared with the passive pleasures provided by professional entertainers. Our earliest analysis of pupil's answers in the Ford Foundation-sponsored study of pupil attitudes toward E.T.V. brought this fact into sharp focus.

Students, ITV, and Large-Group Instruction

To appreciate this fact, one must go beyond flat statements by pupils that they like or dislike educational television and explore the "why" behind such comments. Statements which attribute dislike to such reasons as having to listen, being expected to engage in follow-up study activities, or missing a point because "it only goes by once," must be considered by anyone evaluating pupils' reactions to educational television.

Becoming responsible for one's learning and discovering that there is a certain amount of hard work connected with this process do not necessarily evoke a pleasurable response from all students and possibly should be counted a normal reaction on the part of pupils who are still growing and

developing. Many of these same reactions to attending courses in regular-sized classrooms or to school in general are also listed by some students.

From a curriculum standpoint, student reactions to the quality of the lessons and their level of difficulty must be carefully assessed through the evidence gathered from testing the lessons in the large classrooms with pupils of different ability levels and through program evaluations by expert consultant teams, such as those authorized by the Board in past studies. The lesson testing process currently underway this summer with our E.T.V. Biology lessons is based on an analysis developed by a team of behavioral scientists, curriculum specialists and television experts working under the sponsorship of the National Association of Educational Broadcasters, a Ford Foundation group.

The Question of Class Size

It is appropriate to look at the magic formula of 30-to-a-class, considering also the many recommendations that this number is too large and should be reduced insofar as possible. In recent years educational researchers have designed experiments for the purpose of answering such questions as:

1. Is 30 pupils to a class the ideal size for class discussion?
2. Is 30 pupils to a class the ideal size to hear a lecture, to watch a demonstration, or to view a television lesson?
3. Is 30 pupils to a class the ideal size to do individual work?

The evidence seems to indicate that class size should be related to instructional purposes. For example, it has been found that 150 students

can effectively observe a science demonstration, hear an outstanding lecturer, or view a dramatic event on television. However, since real learning is much more than an assimilation of facts and information, each student must become actively involved in discovering relationships among these facts and in learning to apply them in situations that are personally important to the student.

This means that students must be provided with opportunities to discuss, to explain, to compare, to analyze, to investigate, to question, and to evaluate. For these kinds of instructional purposes, small groups of five to fifteen are more appropriate. Finally, the learning process must include individualized learning activities which provide the pupil with opportunities to develop his own unique abilities and interests and to grow toward increasing responsibility for his own learning. In a world where the quantity of knowledge is ever accelerating, it would seem that two of the most important things that teachers can develop in a student are the skills of learning and a love for learning. When pupils have developed those skills and motivations which foster these two important objectives, pupils are then ready to learn in the laboratory, the library, or the individual study carrel.

Therefore, it would seem that there should be some periods of time when pupils have the experience of being in a large classroom group. They will have this kind of need on frequent occasions after they get out of school, whether it is participating in a religious service or in attending a large class at some college or university. The possibility of using

one-sixth of the school day in this type of activity should be given careful consideration.

One of the overall goals of any school system is to provide experiences for young people that enable them to become responsible individuals. Experiences in large classes in combination with other group sizes determined by the instructional tasks to be accomplished can provide the child with a full range of learning opportunities that help him to achieve this goal.

PATTERNS IN INSTRUCTIONAL TELEVISION UTILIZATION

Patterns in Elementary Schools

There are three patterns of utilization in elementary schools. Some large groups and even single classes view television in the cafetorium or activity room, returning to regular classrooms for follow-up instruction. In other schools, there are sufficient television receivers which can be rotated between classrooms. Finally, some schools have permanently-installed television receivers in every classroom.

Patterns in Secondary Schools

Generally speaking, in the secondary schools, television instruction consists of a telelesson each day of the week. Out of the five days, one lesson may be an optional film. There are other patterns that have been or are being used: 3-2 and large-group instruction with small-group follow-up.

3-2 Patterns

For six weeks in the spring of 1964, an experimental 3-2 program of three telecasts per week with two dark screen days was initiated in the junior high subjects. A number of schools experimented with the use of the two dark-screen days in various ways: library research, seminars for advanced students, special guidance, developmental reading, audiovisual sessions, correlated English, and small-group discussions. Teachers of the large classroom requested that the 3-2 scheduling be discontinued because they felt that more staff assistance was needed, space was not available for small groups, and instructional materials were lacking. They asked that the pattern of 5 days of television instruction be resumed or at least 4 days of television with an optional televised film on the fifth day. The 3-2 pattern was then discontinued.

In 1967-68, three Science 7 and two Science 8 telelessons will enable Science 7 pupils to participate in small-group laboratory experiences twice weekly while Science 8 pupils will have two days of large-group instruction and still have three days per week in the laboratory. Previously, all students in Science 7 met in large groups every day, and all Science 8 classes met only in regular groups.

Large-Group Instruction with Small Group Follow-Up

English 10 and Biology 10 pupils in those classes using television spend, during a two-week period, a total of 10 periods in large-group instruction with 45-minute telecasts in both English and Biology and ten periods of

either small-class instruction in English or laboratory experiences in Biology. General presentations are made in the telelessons in large groups, and individual and small-group learning activities suitable for different levels of pupils'achievement take place in the regular classrooms and laboratories. The 45-minute telelessons are a major instructional resource to complement the individual teachers' instructional purposes related to the subject area--either a televised program available for optional use or follow-up instruction in the large classroom.

On an experimental basis during the 1966-67 school year, both English 11 and History 11 were scheduled to permit large-group instruction (including telelesson and follow-up) alternated daily with small-group instruction. In the small classes, instruction centered on discussion, writing, and other aspects of English 11 and History 11 as warranted by the abilities of individuals in the classes.

EFFECTS OF DROPPING ETV

If the Dade County Board of Public Instruction decides to drop instructional television either in 1967-68 or in 1968-69, these would be the effects upon

Personnel:

1. The Board would lose the services of 20 non-instructional personnel of the Television and Radio Operations staff who would seek employment elsewhere. Thirteen have been Board employees for five or more years; three, for more than ten years. Their payroll for 1967-68 totals more than $165,000.
2. The Board would lose the services of 24 non-instructional employees of the Television and Radio Production staff. Eight of these Board employees have been with the Dade County schools for five or more years; three, for ten or more years. Their payroll for 1967-68 totals more than $160,000.
3. Fifteen instructional personnel of the Television and Radio Production and the Utilization staffs (11 studio teachers, a production supervisor, a coordinator of ITV-AV materials, a coordinator of utilization, and a special teacher) would be redeployed. Their 1967-68 payroll totals more than $153,000.
4. The Board would lose the services of the Community Television staff of 16 employees. The Board's contribution to their payroll for 1967-68 is $74,904.
5. Based on last year's class enrollments and teaching schedules, more than one hundred teachers of the large classroom will need to provide more than 13,000 additional hours of instruction in 1967-68 to replace the

instruction provided by telelessons. Since most teachers will average at least an hour's preparation for each hour of this additional teaching responsibility, this change represents an increase of at least 26,000 teacher-hours.

6. If in-service education is to be continued as part of the total school program, increased staffing would be necessary. For example, one teacher this past year conducted an in-service telecourse in linguistics for 694 teachers. In seven other in-service telecourses 596 teachers were enrolled. Without television, these courses would have required 20 or more teachers instead of eight.
7. The development of the talents of teachers and other Board employees through employment as studio teachers, teachers of the large classroom, and television technicians would be ended. Fourteen former studio teachers are now in administrative and supervisory positions, not only in Dade County but also in other counties of Florida as well as in other states. A secondary district director, six principals, and six assistant principals were formerly teachers of the large classroom. Five former technical television personnel are now in sales and television elsewhere in the nation.
8. Thirty-three teachers with no previous experience in teaching large classrooms will have to conduct large classes for 55-minute periods without television as a resource.
9. The workload of the maintenance staff will be reduced so far as television sets are concerned; however, increased use of other in-school audiovisual equipment will necessitate increased maintenance.

Should the Dade County Board of Public Instruction elect to drop ETV, the decision would have these effects upon

Curriculum:

1. Six and one-half hours per day of instructional telelessons would no longer be available in elementary schools to the 54,147 pupils who used them in 1966-67. Among these would be Spanish and elementary science, grades 3-6.
2. Fifteen and one-half hours per day of instructional telelessons would not be available to secondary school pupils.
3. Three hours per day (at the minimum) of in-service education telecourses could no longer be available for teachers. Updating teachers in course content, teaching techniques, and technological advances in teaching materials and equipment will be much slower, more difficult, and more expensive without television.
4. Summer instructional programming and testing of previous telelessons would no longer be possible. The capability of 24 hours each day (8 hours on each of the three channels) exists for next summer.
5. The Television Studio Production Course 154 and the Television Studio Technicians Course 155 of the Division of Vocational, Technical, and Adult Education could no longer be offered as effectively or in the way it is now being offered. (Refer to the July 17, 1967, resolution of the Television Advisory Craft Committee attached.)
6. Curriculum changes would be much slower, less effective, and would require additional supervisory and in-service personnel. Problems in

curriculum related to introducing new courses have been assigned to television in the past because of its capability for spreading new ideas and techniques widely and rapidly. It has been used to update science in the elementary schools; for guidance units, the FLES Spanish lessons, and the Americanism vs. Communism unit; and to introduce the Biological Science Curriculum Study course; it is to be used in 1967-68 for new mathematics for the gifted and for the World Cultural Geography course.

7. For the first time in ten years 7th graders in nine junior high schools are to have laboratory experiences because television programming has made it possible to use lab space efficiently. Alternately scheduled 7th and 8th grade science television classes in large groups and laboratory small-group combinations would have permitted both 7th and 8th graders to have TV demonstrations and laboratory experiences. Without television these plans would have to be changed.

If the Board should choose to drop television, these would be the effects upon

Education:

1. Opportunities for simultaneous, system-wide communication for events such as the Superintendent's Annual Address would be lost.
2. The lead time gained by the Dade County schools in attacking the problem of educational technology and developing personnel experienced in this field would vanish. All but ten states now have at least one educational television station, and except for San Diego, California,

and Baltimore, Maryland, E.T.V. is now serving the 25 most populous centers of the United States. Dade County will no longer be nationally recognized for its leadership in this field.

3. Pressures to abolish large classes will be redoubled. Should it be necessary to reduce the size of large classes, school offerings would have to be cut back and class sizes in other subject areas would need to be increased. For example, it might not be possible to continue to offer as many electives in senior high schools as formerly. English classes might have to be increased again to more than 25 pupils per class; the number of offerings in schools' total programs might have to be reduced.
4. Problems concerning schools' accreditation will arise. Refer to the June 27, 1967, letter of Lee Roberts, Director of School Accreditation, Florida Department of Education, to John McIntyre attached.
5. In-service telecourses would no longer be available for updating teachers' knowledge and skills.
6. Personnel from the Radio and Television Utilization staff would no longer be available to offer in-service programs for teachers of the large classroom.
7. Information about developments in new uses for media and different uses for existing audiovisual aids for instruction could not be widely and rapidly distributed.

Should the Board choose to drop television, these would be the effects upon

Finances:

1. More than $700,000 would be available for expenditure elsewhere.
2. The transmitter building and equipment in Broward County, now jointly owned by the State Department of Education and the Board, would no longer have its original function.
3. The radio transmitter and antenna would have to be relocated in the Lindsey-Hopkins Building and personnel employed to produce and transmit radio programs, unless radio is also to be discontinued.
4. The Board would realize little or nothing in the years to come on its capital investment of $1,317,255 in television facilities and equipment.
5. There would be no further use for the more than 2,800 lessons in the videotape library.
6. Should the large classes with or without television be discontinued within the next few years, 342 new classrooms would have to be constructed at a cost of more than $6,840,000 just to house last year's large classes adequately. This figure is based on the estimates of secondary school administrators.
7. Expansion of the utilization staff would be necessary. Teachers of the large classroom, new to the demands for total group instruction without television as a resource, would need additional in-service training. Thirty-three of these teachers will be teaching in the large classrooms for the first time.

8. More than $300,000 at the minimum would have to be spent for films, other instructional aids, and equipment for use exclusively in the large classroom. A study of this situation conducted by the Audiovisual Center is attached.

9. Forty-six consoles for auditoriums for the proper showing of films, slides, filmstrips, and transparencies at an average cost of approximately $1,200 each would be essential for large-group instruction. (Refer to Miss Culver's July 14, 1967, Follow-Up Report on Large Classrooms Utilizing Instructional Television attached.)

10. No instructional programs would be available for the more than 1,300 TV sets and stands in elementary and secondary classrooms.

11. The electronic distribution systems in 122 schools would be ineffective.

12. The recently negotiated and very favorable contract for the Biography series of films with television rights for eight years at a total cost of $3,400 would be relatively worthless.

13. Dropping ETV would thus have many significant effects upon personnel, curriculum, education, and finances. A most significant effect has not even been mentioned heretofore. Many students and some teachers feel that dropping ETV will automatically do away with large classes. Of course, when and if ETV is dropped, they reason, large classes are next to go. If the task of teachers of the large classroom with ITV was difficult, it will be even more so when parents, pupils, and teachers learn that large classes are here to stay. They are a permanent part of the continuing problem which faces the Board of Public Instruction--reconciling an ever-increasing school population with limited financial resources.

PART-TIME OPERATION

It is difficult to determine the nature of the assignment to explore the "possibility of using Educational Television in a limited way as a part-time teaching aid, rather than a full-time educational process." As a matter of fact, television as it is now being used in Dade County is just that--a part-time teaching aid. Nowhere, even in in-service telecourses for teachers, does it serve as a full-time educational process.

From the description of the television operation, one can see many possibilities for reductions in the services that television renders to Dade County schools. These are some of the possibilities:

1. The medium can serve as a distributor for materials already prepared: films and telelessons in the present videotape library or in national and state libraries.
2. The medium can be used to distribute only to elementary schools, to junior high schools, to senior high schools, or to a combination of these.
3. Only one channel can be used, and the others can be released to commercial or other educational institutions.
4. The demand upon the production staff can be reduced. For example, the World Cultural Geography telelessons or the Biology 10 and History 11 telelessons can be eliminated.
5. The operation can be limited to Community Television Foundation telecasts.
6. All channels can be given up, and programs can be telecast over commercial channels.

Operation

To operate the various channels, singly or in combinations of different channels for eight hours, would cost in terms of 1967-68 salaries:

	Staff	Operations	Total
Channels 2, 17, and 2500-megacycle	$131,848	$98,528	$230,376
Channels 2 and 17	127,288	98,528	225,816
Channel 2	127,288	95,528	222,816
Channel 17	127,288	92,528	219,816
2500-megacycle channel	120,232	87,528	207,760

The difference in operational costs between 3-channel operation and the cheapest single operation for eight hours is $22,616.

As a guide to the possibility of telecasting instructional programs over commercial channels, these are the costs:

Channel 10 - $200 per half-hour until noon

Channel 7 - $360 per half-hour until noon
OR
$600 per hour until 5 p.m.

Channel 4 - No time available

Production

The cost of part-time operation insofar as television production is concerned depends upon the degree to which the Board wishes to continue its support of school programs with television instruction.

Elementary School Programs

It would be relatively inexpensive to maintain the support necessary for the elementary school program. There are four possibilities for part-time operation at this level:

1. Telecast those series of telelessons that require no further production: Spanish; Time for School; Small, Small World.
2. Produce those programs that require the least revision and a minimum of production: Elementary Science, Literature and the Arts.
3. Produce programs for the elementary schools only. New programs would be produced and previously produced programs would be revised. It is planned to produce next year a 24-lesson self-instructional mathematics series for the more able sixth graders and 25 additional lessons in the two social studies series: "Now" and "Ideas in Motion."
4. Any combination or all of the previous three possibilities.

The cost of doing the first possibility would be rather low, requiring the use of Channel 2 only, and one traffic and materials clerk to process royalty payments. Other costs would be approximately $5,000 for royalties and rentals. If part-time operation includes possibilities 2, 3, or 4, then the costs would increase to include the operation of one studio and the employment of four studio teachers, two producer-directors, two graphic artists, a photographer, materials specialists, and supervisory support along with the necessary materials and services.

Secondary School Programs

At the secondary level there are also four possibilities for part-time operation:

1. Telecast those series for which completed sequences of videotaped lessons are available: Science 7, History 8, English 10, Biology 10, English 11, and History 11. No production is necessary.
2. Produce revised telelessons for those series that need curriculum revision: Biology 10, History 11, and English 11.
3. Produce new series of telelessons: World Cultural Geography and Science 8.
4. Any combination or all of the previous three possibilities.

Biology 10 is undergoing student evaluation this summer. The complexity of content in the BSCS Biology has presented difficult production problems. Unless this summer's student evaluations are used to make appropriate revisions in Biology 10, this series should not be telecast. If it is telecast and television is continued, both this series and English 10 should be experimentally used as semester courses, one period of television and a following period the same day of follow-up instruction in English or laboratory work in Biology. There would be little or no delay in follow-up. Thus, students would earn in one semester a year's credit for Biology and English.

History 11 has been under revision during the past year. Teachers of the large classroom have participated in the evaluation and in the determination of lessons that need revision. This series also should not be telecast unless appropriate revisions are made.

The only additional cost for telecasting useable existing series of secondary telelessons, in addition to the elementary programming, would be the cost of operating a second or third channel depending on scheduling needs along with the additional royalties and series rentals, approximately $15,000.

There are two secondary telelesson series which are to be produced this year, and for these no telelessons are available for telecasting. World Cultural Geography, a series of 108 lessons, supports a new social studies curriculum in the 9th grade. Science 8, a 72-lesson series, is designed to support 8th grade science laboratory instruction, and in a scheduling interchange make it possible for overcrowded junior high schools to provide a science laboratory experience for 7th graders twice a week.

If it is determined that production in certain secondary areas is desirable or necessary, it would be necessary to employ studio teachers at the ratio of one teacher to each 40 lessons to be produced; one director to each 80 lessons; and sufficient graphics, studio, secretarial, and supervisory personnel, and materials and services to support quality production.

Utilization

With or without television, the utilization staff needs to be expanded. At the minimum there should be two special teachers for the junior high schools and one for the senior high schools with a supervisor to be responsible for improvement in large group instruction.

Summary

These then are the alternatives facing the Board in connection with part-time operation of television:

1. Part-time operation limited to elementary, secondary, or community television.
2. Restriction of telecasting to anyone or two of the three channels presently available.
3. Telecasting previously produced videotaped programs only.
4. Minimum production of telelessons for elementary or secondary levels or in combination.
5. All or any combination of previously outlined possibilities.
6. Continuing part-time operation and production.

FUTURE POSSIBILITIES FOR EDUCATIONAL TELEVISION

The staff responsible for Instructional Television agree wholeheartedly with the Board that the conditions for learning in the large classroom are unsatisfactory. The problems connected with instructional television are only a part of the larger, system-wide problem--the critical lack of adequate classroom space. For many of our large classrooms this means inadequate lighting, inadequate acoustics, excessive heat and cold, poor conditions for viewing, improper seating, and ineffective two-way communication. Dropping television will not solve these problems in the large classroom.

Television, as part of our technology for distributing information and influencing the development of knowledge, attitudes, and values, is presently a permanent part of the national educational picture. In the 2-year period, 1965-1967, the number of ETV stations has increased from 113 to 135. The Dade County Board has invested more than $1,300,000 in using this medium for educating its children and adults; it has personnel trained and experienced in television; it has the equipment, facilities, supplies, and licenses for using television. A commitment has been made.

The goals for instructional television, however, are not yet clearly understood by many people. Criticisms of instructional television reflect this confusion. Is television to entertain? Or is it to instruct? Is television to save building space, money, and personnel? Or is it to be used in both large and small classrooms or individual study carrels, whichever may be appropriate to learning at that time? Is television to

be the teacher itself, aided occasionally by the live teacher in the classroom? Or is it to supplement, expand, and illuminate the instruction of the live teacher in the classroom? Or is it a combination of many or all of these things?

Large-Group Instruction

The problem of large-group instruction will remain with the Dade County public schools at the secondary level for quite a few years, even if television is dropped. The Board, school administrators, supervisors, and teachers have been working on this problem for ten years. No fewer than twenty studies have been made on television in Dade County and its attendant problem--large-group instruction. Some of these studies have emphasized the problem of large groups. Miss Culver's July, 1967, Report attached is the latest of these and enumerates the actions presently under way to improve learning conditions in large classrooms.

Although individual attitudes and perceptions vary regarding the instructional effectiveness of large-classroom instruction using television as a resource, the objective evidence has been, and still is, quite clear: students do learn. The most recent research study is consistently in line with previous studies in this area and was done by the Evaluation Unit of the Research, Development, and Evaluation Division. Assisting in these various studies is Dr. Garret Foster, Assistant Professor, Florida State University, and Director of Research for the Nova Schools at Ft. Lauderdale. The Unit collected and analyzed data with respect to the academic performance of students who have received instruction via television and

without it. It was found that there were no significant differences between TV and non-TV groups in student achievement in tenth-grade Biology when differences in ability were controlled statistically. One interesting trend which will require further study is the probability that high ability girls who have had TV instruction perform better on a standardized test of English than high ability girls who have not had TV instruction. Data seem to indicate the opposite for high ability boys. However, both boys and girls of average ability who have had televised instruction in English perform better on standardized tests of English than students in non-TV classes. Such evidence could be used in the future as a basis for reorganizing school schedules and further individualizing instruction for students.

What then could be the possibilities in the future for Television in Dade County? Three general goals could be established for future action:

1. Flexibility in program scheduling
2. Centralized production and distribution of quality telelessons
3. Decentralized production and distribution of quality telelessons

Flexibility in Program Scheduling

Despite the operation of two television channels during the school day for the purposes of instruction, it has not been possible to schedule offerings more than twice daily so that class sizes could be reduced. The flexibility of television scheduling was observed by the Quality Education Committee in its 1963 report.

> "The inflexibility of the daily schedule and the poor programming of student schedules is one of the most serious barriers to the improvement of quality education in many school systems. This is also a barrier to quality education in the Dade County Public Schools.
>
> "The second phase of the scheduling problem is related to the telecast schedule. The program follows a rigid format that does not allow for flexibility in the pattern which curriculum and instructional purposes should require.
>
> "In short, the purposes of instruction should determine the size of classes and the use of various media. Television and large group classes should be used when they best serve the purpose of instruction in a particular course and not as a means to store pupils at peak loads in the school day."

The Board can choose to continue television and use all six channels for which it now has the licenses. It will then be possible to provide the necessary air time for telecasting programs adapted to the special educational needs of many small groups of students. Scheduling of students in smaller groups can be done. For example, series of telelessons for the handicapped, for pupils with special learning problems, and programs in the arts and crafts could be telecast with the expanded facilities. Heretofore, programs during school hours have had to be limited to large groups in required courses.

The in-service education program could be expanded with additional channels in use. A number of simultaneous telecasts during immediate post-school hours could be used in updating teachers in the various content areas. Teachers at this same time could also be informed about the latest findings of research and project activities not only in Dade County but also through the country. Outstanding consultants visiting in the County could reach

many more teachers through the medium of television and demonstrate the use of equipment and techniques not only at the time of the telecast but at faculties' convenience at later times when desired by the faculties. Videotape recorders in schools could expand this capability for in-service education. They could be used to play back previously recorded in-service education programs. Fast-changing methods in teaching and the speed-up in knowledge in the different disciplines make it necessary for school systems the size of Dade County's to assume a larger share of responsibility for updating and continuing the in-service education of teachers.

When each school becomes equipped with a videotape recorder, teachers and principals can then work out their own in-school schedules of programs in line with what they want. Programs previously recorded in their school from one of the Board's channels can be distributed by the in-school recorder to classrooms when teachers want the programs.

Films in heavy demand at a particular time of the year could be distributed at night and during the early morning hours for recording in the schools and later replay when desirable in the schools. Such a use of television would drastically reduce the need for multiple copies of particular films in the Audiovisual Center and practically eliminate cancelled bookings. In addition, televised film showings do not necessarily require darkened classrooms with blackout curtains.

Central Production and Distribution

Central production of specific portions of visual information and segments of instructional materials is desirable when sophisticated and professional

electronic equipment, personnel, and controlled studio surroundings are needed. The central producer develops materials in terms of curriculum needs and distributes them through the various channels to any school which in turn banks the materials for redistribution at a time or times when the consumer can most effectively and efficiently use and re-use the material.

Specific portions and instructional materials segments will be available only if produced by a local central production and distribution center. The storage of this material will be at individual schools where teachers will have accessible visual materials necessary for quality instruction. All materials, however, would not need to be banked at the school. Seasonal and continually updated and revised material would be kept centrally and distributed through one of the channels available for distribution on demand.

The Central Distribution Center and the Audiovisual Center can merge their production and distribution functions in supply consumer demands on a daily rather than a week to week basis. Once merged, the combined staffs could reduce production and distribution costs considerably. Duplicates of films and other visual materials could become unnecessary.

One of the most valuable of the future possibilities for ITV is the production of short series of lessons to support specific units in all areas of the curriculum.

In every content area there are units of instruction which require a rich supply of audiovisual materials for the instruction to be effective. In

many of these units commercial materials are either not available or not sufficiently specific to be effective. Supervisors have indicated interest in developing future programs in these areas:

1. Industrial arts at the elementary level
2. American industries involving mass production and the free enterprise system
3. Library usage and reading stimulation
4. Orientation for new teachers
5. Our visual heritage--art in the life of man
6. Art activities lessons for the elementary pupil
7. Previewing films county-wide
8. Demonstrating new equipment, techniques, and processes
9. Presentations by consultants visiting the County
10. Additional teacher in-service training programs

Other possibilities are a short series of lessons on Florida government for Civics 7, short series in elementary music and art, lessons which demonstrate industrial arts skills, others which support complex concepts such as those in Economics and other subjects in which teachers have limited competencies, demonstration lessons in debate; instrumental music, lessons directed to supporting programs with gifted and exceptional children.

Each of these is an example of a content area to which television does not now offer support. In the future, it seems that television will most likely provide broader support for the curriculum with shorter series in most subject areas.

Decentralized Production and Distribution

Along with centralized production and distribution, there can be decentralized production and distribution. Schools in Dade County are now being buit with their own facilities for these functions. Existing schools are adding their own facilities to produce and distribute videotapes.

In-school production and distribution will establish another source of materials that can be exchanged among schools. Outstanding dramatizations, musical programs, arts and crafts displays, experiments, and other programs can also be distributed by Central Distribution to all schools in the County. Decentralization provides possibilities for programming students' schedules in different ways and permits additional offerings in the schools' programs.

In-school television can become an indispensable component of tutorial programming ans self-instruction. Schools can develop accelerated programs for the slow learner.

Development of TV production and distribution facilities in schools will provide individual teachers with a mirror for self-evaluation and improvement. Offensive mannerisms and shortcomings in professional functions can be corrected Complexities of teaching can be carefully analyzed through repeated viewings of videotapes. Teachers can focus on particular aspects of the teaching-learning process and study them repeatedly to determine strengths as well as weaknesses.

Decentralization in itself will not replace the central supplier; it will add a totally new dimension to instructional television.

Summary

The purposes of this ETV Study, 1967, have been to:

1. Describe the nature of the television operation
2. Analyze the effects of dropping ETV on personnel, curriculum, education, and finances
3. Present the alternatives for limited part-time operation
4. Discuss possibilities for the future of television in Dade County

The following alternatives for possible Board action have been developed in this study:

1. If the Board chooses to drop ETV and abolish large classes, additional outlays of money for materials, staff, and an expanded building program will be essential.
2. If the Board chooses to drop ETV and maintain large classes, then additional outlays of money will be required for instructional materials, aides, equipment, and staff.
3. If the Board chooses to limit the part time operation of ETV, the type of limited operation needs to be selected.
4. If the Board chooses to continue the present operation, the future possibilities may become realities.

RESOLUTION

OF THE TELEVISION STUDIO PRODUCTION AND TELEVISION STUDIO TECHNICIANS ADVISORY CRAFT COMMITTEE, REQUESTING THE CONTINUANCE OF THE USE OF THE TELEVISION FACILITIES FOR TELEVISION STUDIO PRODUCTION COURSE 154 AND TELEVISION STUDIO TECHNICIANS COURSE 155 AS APPROVED BY THE ADMINISTRATION AND THE BOARD OF PUBLIC INSTRUCTION OF DADE COUNTY, FLORIDA, IN 1959 WITH THE PROVISION THAT ON THE TRANSFER OF BROADCAST EQUIPMENT, COSTING MORE THAN $60,000 PURCHASED WITH ADULT FEES BY THE DIVISION OF VOCATIONAL TECHNICAL AND ADULT EDUCATION, TO THE EDUCATIONAL TELEVISION DIVISION, THE TRAINING CLASSES WOULD BE GUARANTEED CONTINUED USE OF THESE FACILITIES AND EQUIPMENT.

WHEREAS, the Television Studio Production and Television Studio Technicians Training classes have been successful in supplying the commercial and educational television industries with qualified production and technical personnel for the past decade; and

WHEREAS, the current and projected television industry requirements indicate greater need for such qualified personnel; and

WHEREAS, it is recognized by the local television industry that these training courses are accepted in lieu of previous professional experience; and

WHEREAS, the present training program provides the local television industry with an immediate source of professionally trained television production and technical personnel; and

WHEREAS, the present program provides an opportunity for local adults to receive professional training, at a minimum cost, in a career in the television industry; and

WHEREAS, this is the only State approved vocational program of this nature in the State of Florida and one of the few in the nation:

NOW, THEREFORE, BE IT RESOLVED:

THAT the Board of Public Instruction of Dade County, Florida, presently in discussion on the joint licensing of Television Channel 2 and the study on discontinuance of instructional television, the Television Advisory Craft Committee strongly recommends that regardless of the action taken by the Board, the vocational training classes be continued, and that courses 154 and 155 will be operated on the same basis as they are now, or if Board action necessitates a change in operation of these classes, they will revert back to their operational procedure of 1959; at which time the television equipment was owned by the Division of Vocational, Technical and Adult Education.

ADOPTED this 17th day of July, 1967, by the Television Advisory Craft Committee of the Division of Vocational, Technical, and Adult Education of the Dade County Public Schools.

Glenn G. Bounty

Chairman, Advisory Craft Committee '75

FLOYD T. CHRISTIAN
SUPERINTENDENT

STATE OF FLORIDA
DEPARTMENT OF EDUCATION

TALLAHASSEE 32304

June 27, 1967

Mr. John McIntyre
Director, Learning Resources
Dade County Schools
1410 N. E. Second Avenue
Miami, Florida

Dear Mr. McIntyre:

This letter is in response to your telephone call of June 26, 1967, in regard to the change from television instruction to large lecture instruction. The change would require some preparation as provided in the standards on pages 51 and 52 of Accreditation Standards for Florida Schools, 1963. In the evaluation of the large lecture instruction, it would appear that items 7 and 8 are very important in the mechanics of offering large lecture instruction.

The change-over would mean that either Acc 2 cards would have to be completed for all schools which did not offer large lecture instruction during 1966-67 or corrections would have to be made on the correction report, Acc B. The Acc B preliminary correction report also would probably show a non-accredited classification due to the number of level 1 standards involved.

It is my understanding from listening to group discussions where Dr. Vincent McGuire was a consultant that the large lecture instruction would have to have prior approval before its utilization.

If we can be of any other assistance to you, please feel free to call on us.

Sincerely yours,

Lee Roberts
Director
School Accreditation

LR/mh

7/20/67

IMPACT OF THE DROPPING OF ETV ON THE AUDIOVISUAL CENTER

In order to fill the gap in film service alone that would be created by dropping ETV, it would be necessary to spend at least $300,000 and possibly more.

One of the services provided by ETV was that of televising a film every week in each of three subjects: History 11 in 12 schools; Biology 10 in seven schools; and History 8 in 28 schools. In addition, the three regular telelessons during the week in each subject area include film clips from educational films.

Because the curriculum guides are written in a particular sequence of lessons, all of the schools would be dealing with the same content at essentially the same time. Therefore, if the Audiovisual Center is to serve the schools in the same way as television now serves them, it would be necessary to obtain these films for each of the subject areas at an average cost of $125 per film:

Subject	No. of copies of films	Total copies for 36 weeks	Total cost
History 8	28	1,008	$126,000
History 11	12	432	54,000
Biology 10	7	252	31,500
			$211,500

In addition to the cost for films in these three areas, there are other costs to be considered, if the present level of instruction in the county is to be maintained. Presently, more than 100 teachers of the large classroom received from 30 to 50% of their daily lessons through audiovisual devices (ETV).

Without ETV, the following services and materials would be necessary:

Equipment:

With the loss of ETV, more equipment would be required to provide the services now offered by ETV. Essentially this would mean an increase in the number and variety of machines presently being provided by the center. Because of the necessity for reliability, it could also mean an improvement in the quality of the machines. Once these machines were acquired, an increase in maintenance would be needed especially in the area of minor repairs, i.e. bulb replacement, cleaning services, and parts replacement.

Film Utilization:

If the unity of curriculum is to be maintained, it will be necessary to increase the number of copies of each film to provide the same service. In order for the audiovisual services presently being provided by ETV in the area of films to be maintained, about 1,600 additional films will need to be purchased. To make these films available to the teachers, an additional 10,908 bookings would need to be made. Besides these additional bookings, work such as film inspection, repair, and cleaning would be increased.

In-Service:

Because of the increase in "on the scene use" of equipment and materials, the center will also need to provide leadership and instruction in the operation and utilization of the audiovisual devices used to take the place of ETV. This would require additional staff services.

Distribution:

If the level of operation is to be maintained, a more effective distribution system would be needed than is presently operating. For a program similar to the ETV use of audiovisual devices to be operational, many more materials and machines would need to be distributed on a modified demand basis if not on a demand basis.

Other Services:

The above discussion refers essentially to motion film and its associated equipment. However, film is only one aspect of the center services that would need to be increased. If a program similar to what is presently being provided by ETV is maintained, additional services will need to be added or increased by the center. These services would include transparency production, audiotape production, film production, and slide production far beyond what is presently being provided. To provide the kind of services presently being provided through ETV, would require larger quantities of equipment and materials as well as an increase in personnel and personnel time.

REPORT ON LARGE CLASSROOMS USING
INSTRUCTIONAL TELEVISION

July, 1967

The April, 1966, Report on Utilization of Instructional Television outlined the status of instruction utilizing television in large classrooms. The status in July, 1967, is as follows:

FACILITIES AND EQUIPMENT:

In June, 1966, the Board approved monies in the amount of $59,330.00 for the following items:

Signal Distribution System for secondary schools	$14,000.00
Microphone Systems	28,800.00
Replacement of 100 TV Receivers	13,250.00
Motorized Screens	1,200.00
Replacement of 8 Overhead Projectors	2,080.00

Distribution Systems: The new video distribution system which was first installed at Miami Norland Senior High School in August, 1966, involves a new video distribution amplifier, wiring, and the conversion of Channel 17 to Channel 5. This system has been installed in thirteen other secondary schools, involving the northwest and northeast districts since the video needed more improvement in these districts than in the south and central districts. This system will eliminate cross channel interference experienced between Channels 2 and 17.

Microphone Systems: The purchase of microphones for the large classrooms did not solve the total audio problem, since the total audio distribution systems in a number of schools needed improvement. After a survey by the engineering department it was decided that separate new audio systems should be installed in the auditoriums of the forty-seven junior and senior high schools.

The maintenance department is designing an audio distribution system for each individual secondary school utilizing television in the large classroom. This system will provide the audio of television receivers and microphones to be controlled through an audio distribution amplifier at the teachers' console or podium. The audio system will include new speakers, amplifier and microphones for teacher and student participation. Although each school auditorium may have the same floor plan as another, the systems have to be designed individually. The maintenance department installed one at Miami Norland Senior before school was dismissed and is continuing the installation throughout the summer.

Television Receivers: The one hundred receivers purchased in the 1966-67 school year were distributed to those schools needing replacement of 1959 receivers. There are 108 of the 1959 receivers still remaining to be replaced.

Motorized Screens: Motorized screens were purchased and installed in the schools with large classrooms which did not have a 12' x 12' motorized screen.

Overhead Projectors: Eight overhead projectors were purchased and placed in the auditoriums of seven schools. One projector was placed in the audio-visual center to serve as a loaner should it be necessary to have the classroom projector in the maintenance department for repair. Also outlined in the report were the physical conditions which needed improvement.

Adequate lighting: A survey was made by each district of lighting conditions in each of the large classrooms. Where unfavorable conditions existed, the principal was notified by the district to rectify the situation. The most critical area in the problem of lighting control is the question of the dimmer device. No provisions have been made to install dimmers in all of the large classrooms. The cost of correction of adequate lighting in an auditorium was estimated at $5,000.00.

Ventilation (Climatic Conditions): Air conditioning would provide perfect climatic conditions in the large classroom. During the past year there were 14 air conditioned auditoriums; four are to be air conditioned this summer and during the next school year.

Console: In accordance with the need for improving the large classroom, the maintenance department has designed an audio-video console. It is capable of housing audio tape deck, overhead projector, filmstrip projector, 16 mm projector and amplifier for audio control of this equipment, microphones and television. Its demonstration was scheduled in Miami Norland Senior High School and the drawing and cost estimates were made available for principals to use in building such a console. A number of large classrooms already have a console which could be adapted to provide the same type of facility.

We have recommended that this console be experimented with in testing the new audio distribution systems which are being installed in the schools before a principal purchases the necessary components to complete the system.

TEACHERS OF THE LARGE CLASSROOM:

In August, 1966, a general utilization workshop was held for three days; special half day workshops for Biology 10 and English 10 teachers were conducted. During the first semester six sessions

were held with new teachers of the large classroom. The purposes were to involve them in planning for organization of the large classroom, useful tools for large group instruction, evaluative techniques, student involvement and invividualized instruction. Twenty new TsLCR attended. This on-going in-service program provided an opportunity to include all teachers-a situation which is not possible during the summer months when many teachers work and attend summer school.

It was also possible during the 1966-67 school year for a TLCR selected during the school year to have a substitute provided for him for a period of at least two weeks. This arrangement meant that he could work with the teacher he would replace in the large classroom and yet visit and observe other teachers of the large classroom. This internship alleviated a number of problems which confront the new TLCR.

In-service training for the 1967-68 school year has been scheduled for August with a two day workshop for Science 7 and 8, one day for World Cultural Geography, continued orientation for Biology 10 and English 10 teachers in half day sessions, and one half day for new teachers with additional bi-monthly sessions scheduled for the first semester.

It should be noted that in-service training is not possible if there is not at least a desire on the part of the teacher to improve his techniques and to become a better teacher.

As a result of Dr. Joe Hall's memorandum of July 20, 1966, a check-list for observation of teaching in large groups was developed and used by principals and directors while observing large groups utilizing instructional television. Those situations which needed improvements in relationship to facilities, equipment and personnel were corrected wherever possible. Detailed reports summarizing the observations of principals and directors were submitted to Dr. Hall in December.

Also as a result of Dr. Hall's memorandum, the ITV Advisory Committee was formed with membership including district superintendents, directors, principals, representatives from the large classroom, the assistant superintendent for curriculum and instructional services, director of learning resources, and coordinator of television utilization. In May the membership was expanded to include representatives from the DCAITV, the local ITV organization. A number of recommendations were made by this advisory group resulting in improvement of the large classroom situation. It was decided to continue the committee during the 1967-68 school year.